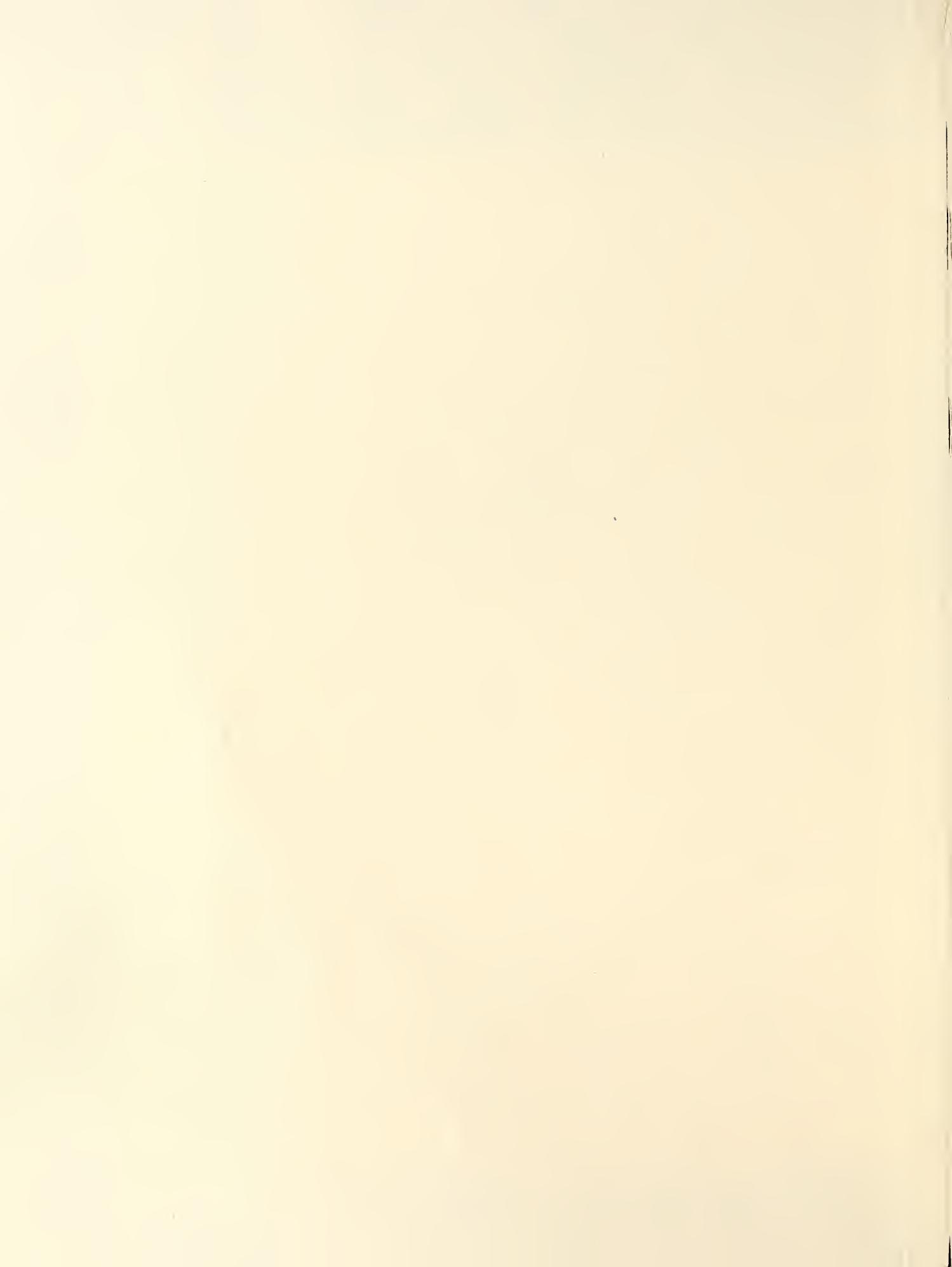


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LET'S BURY THE TERM "STRIP"

Nina Wilcox Putnam once confessed to having very nearly committed a homicide. The occasion was during her first visit to Grand Canyon. Standing awestruck on the edge of Nature's supreme effort to remind man of his insignificance, she was vaguely aware that another woman had walked up beside her. Turning finally to the newcomer with some thought of attempting to express her jumbled emotions, she was stunned when the creature smiled politely and said, "It's cute, isn't it?"

I feel much the same way - and for the same reason - toward the use of the word "strip" in speaking of our shelterbelt plantings. For one thing, the word means nothing to anyone besides ourselves; for another, it is sadly lacking in the dignity which befits a plantation of forest trees.

As a matter of fact, we inherited the term from the surveyors who laid out the sites for our earlier shelterbelts; they were surveying - and very properly - "strips" of land. We probably still negotiate for "strips" of land upon which to establish plantations, but by the Beard of the Prophet we plant shelterbelts!

The word is as familiar on the Plains as a red barn; no one has any doubt about what we mean when we say "shelterbelt." Let textile mills manufacture "strips" of cloth, and agronomists establish "strips" of Bermuda grass if they will, but let us plant shelterbelts. If I were a farmer I would be tickled pink to get a shelterbelt, but it would require a pretty high-powered negotiator to talk me into a "strip."

In writing, if the word becomes unduly monotonous through repetition, we might descend to "belt," or even "field windbreak" in the interest of good composition, but let us give "strip" a decent but firm burial.

- E. L. Perry, R.O.

PROJECT INSPIRES SOUTH DAKOTA FARMER TO EMULATE EXAMPLE

One of the aims of our Project is, or at least should be, to inspire a heavy increase in tree planting in these prairie regions through individual initiative as the result of our activities. This influence is already becoming noticeable in South Dakota in several localities. One of the outstanding examples to date is in connection with the Clarence Fredrich farm four miles east of Tyndall, South Dakota.

In 1936 when land negotiation work was in progress at Tyndall, Mr. Fredrich was decidedly skeptical. He wanted a belt of trees on his farm but felt they could not be made to succeed because of the difficulty he had experienced in establishing a small ash planting near his house. He finally signed up for a standard 1936 shelterbelt, which was planted by the Forest Service. In spite of the fact that 1936 turned out to be the worst drought year in the State's history, his 1936 belt was very successful and thrived even under these severe conditions. When he saw how comparatively easy it was to establish protective shelterbelts he became enthusiastic. His attitude was "If they can do it, why can't I?"

In 1937 shelterbelt operations in the Tyndall area were suspended and it was therefore impossible for Fredrich to have additional belts planted on his farm by the Forest Service. However, he was determined to get additional trees planted, so he hired some of the W.P.A. laborers who worked for the Forest Service in 1936 and went to work. He planned and planted his new belts exactly as were the 1936 Forest Service plantations, including species, spacing, and arrangement. In addition to this he planted two rows of cedar and a row each of lilac and pine along the north side of his farm adjacent to Highway No. 50.

Mr. Fredrich now has approximately 35 acres of trees (including the Forest Service belt) on his farm. Although much of the land occupied by the trees is infested with creeping jenny, the survival and growth has been remarkable. He has done such an outstanding job that it is truly an inspiration not only to the folks in his community but to us Plains foresters whose business it is to succeed with trees under adverse conditions. He has established a standing demonstration that conclusively proves that trees can be made to succeed admirably if Forest Service methods and principles are followed. He has not only protected his entire farm but his buildings and feed lots as well.

When a man has accomplished what Fredrich has with trees under difficult prairie conditions, one would naturally assume there must be a thrifty home-building wife somewhere behind the scenes. This is one case where that is not true because Fredrich is a bachelor. Although he is a retiring individual, living much to himself, his success with trees during the past two years as the result of Forest Service influence is an inspiration to his community and to us.

- Walter S. Palmer, S.Dak.

WE'RE GOING TO NEED A DIVISION OF RECREATION ONE OF THESE DAYS

The Hudson, Kansas grade school graduating class of 25 members held a picnic in the Herman Witt '35 shelterbelt this spring. Dinner was eaten in the shade of the cottonwood and Chinese elm trees, and the day was spent in studying the different species of trees.

- Glenn W. Spring, Kans.

LET'S ALL HELP

I think it is obvious to all of us that our Project still has before it a vast number of unsolved problems. We cannot all be research men in the strict sense of the word, but each of us has an opportunity - and an obligation - to assist in their solution in connection with our daily work.

Each individual member of our organization should select as his special assignment one or more of these unsolved problems which to him appear important, and study, observe, experiment, compare, investigate, and draw careful conclusions in connection with all the factors involved in their solution.

A concrete example might be the problem of "What species are adapted to the heavier soil types?" The field man has the opportunity to observe all his plantations in all types of soil. He can see how native trees of various species are succeeding on various soil types. He may observe numerous plantations of many species throughout his district or State. Where one species is an obvious failure or a striking success, he may want to determine the soil type and other influencing factors. All of his observations and any soil inspections made should be recorded. Whenever sufficient worth-while data has been submitted, he should compile the material and submit it to his superior officer. This could be done in the slack season (if there is any such season on this Project!)

If a number of such reports come into the Regional Office each year, the material so contributed will be of real value to those charged with the developing or revision of standards.

The individual making the contribution may have the satisfaction of seeing his pet opinion, definite conviction, or "theory proved beyond any reasonable doubt" adopted as standard practice at some future date.

One case I have in mind concerns the box elder. This species was not authorized in the northern States in the beginning. A report was submitted by a member of our organization, strongly advocating its use, and now this is an important, authorized species in the composition in the northern States.

Some of our nurserymen are not yet at all convinced that the standard 21-inch row spacing for nursery sowing is the best. To those I would suggest that they study and supply proof that some other spacing is preferable.

And so on--every one of us could name a number of unsolved problems. If you are convinced of your opinion, show the proof!

In all new undertakings, ideas, practices, and standards swing back and forth from one extreme to the other like a pendulum, until after awhile the pendulum stops at a point which is the stable center of equilibrium or the "golden mean," or the sensible and desirable middle course. Just like matrimony, cheese, and masterpieces of art--they mellow with age.

- Max Pfaender, Okla.

### ONE CROP OF WHICH THERE IS NO SURPLUS

A farm woman of South Dakota recently wrote the President suggesting that Federal liens on farms be cancelled upon the condition that the farmer plant a stipulated number of trees on the farm. In concluding the argument, she said:

"We need more trees to help check dust soil erosion, to temper the hot chinook winds, to draw rain and for shelter, besides a woodlot would come in very handy. I have often wondered why the houses in cities and towns are surrounded by such fine tall trees, while the houses in the country can't even boast of one shade tree. In the fall there may be lamenting about surplus grain, beef and pork, but I am positive that there will be no lamenting about a surplus of trees."

### MAKING TREE PLANTING PAY

The forestry department of Victoria, Australia has introduced ponderosa and Monterey pine (*pinus ponderosa* and *pinus radiata*). Monterey pine has made more rapid growth than has ponderosa. A compartment with average elevation of 1400 feet and annual precipitation of 30 inches was planted with Monterey pine in 1916, spaced 8 x 8 feet with 680 trees per acre. This was thinned in 1929, removing 1,900 board feet per acre, and retaining 20,095 board feet per acre in 482 trees with diameters from 7 to 15 inches. The thinnings had no sale value. The second thinning, three years after the first, removed a volume of 16,142 board feet per acre and a volume of 13,972 board feet was retained in 234 trees. The volume removed was sold at \$3.20 per M, an average return of \$51.65 per acre. A third thinning was made in 1937, five years after the second, removing a total of 10,885 board feet per acre and 30,330 board feet per acre was reserved in 153 trees. The volume removed was sold, at a rate of \$8.50 and \$12.00 per M, giving a total return of \$122.27 per acre. The grand total returns per acre covering a period of 20 years for all material removed in the two thinnings was \$173.92. The average cost of planting, including clearing and preparing of land and planting trees was \$33.46 per acre. The maintenance and protection amounted to \$1.20 per acre per year, a total charge of \$2.87 per acre per year for planting, maintenance and protection, showing a net return of \$5.82 per acre per year with no interest allowed on the investment.

These data were secured from Mr. W. W. Gay, Forestry Commissioner of Victoria, at the time of his recent visit in the Southwest.

- Daily Bulletin, Region 3

### PROJECT FURNISHES MATERIAL FOR THESIS

Mr. Larry Solin, Syracuse, New York, accompanied by Richard Murphy of Indianapolis, Indiana, inspected shelterbelt plantings in the Neligh District June 14. Mr. Solin, who is completing his master's degree in forestry at Syracuse University, made the trip to secure information and material on shelterbelts for his use in completing his thesis for his master's degree. Mr. Solin was very complimentary in his remarks regarding the accomplishment of the District, and in his evaluation of shelterbelt plantings as a soil-conserving practice in his part of the country.

- E. Garth Champagne, Nebr.

## WHAT A COUNTRY!

New unforeseen conditions in Kansas which are climaxing a three months' period of torrential rains are causing no little concern to the farmers, as well as the District and subdistrict officers. Several fine shelterbelts are now suffering from an overabundance of water caused by poor drainage and low places in the fields. Many trees are showing the effects of water scald from the few hot days that have existed so far, and other trees that are not adapted to such moist conditions have perished.

At the time these belts were negotiated this country was considered to be on the edge of the Dust Bowl where rainfall was never overabundant, but I am now led to believe that we must plan the location, composition, etc., to cope with all conditions. Closer attention should be given to these special areas. Advocating lister damming and perhaps some ditching and dyking would probably have to be done in extreme cases, and only species adapted to these conditions planted in the low spots.

- Jewell Harrison, Kans.

## BIRDS SET UP HOUSEKEEPING IN DISCARDED FOOTWEAR

The Old Woman Who Lived in a Shoe is a nursery legend, but the pair of wrens who live in a shoe on the U. S. Forest Service Nursery tract at Enderlin, North Dakota isn't the product of anybody's imagination. The shoes were allegedly tossed into a tree by a WPA worker last fall while engaged on irrigation work.

Workmen, who sat under the tree to eat their lunches recently, found the wrens had set up housekeeping and soon there's going to be some baby wrens. When approached, Mrs. Wren slips out of her newly claimed domicile and perches on the topmost branches of the tree, vainly trying to distract attention from the nest.

- Clipped from the Fargo Forum (N.Dak.)

## COOPERATORS LIKE OUR CULTIVATING MACHINERY

Reporting upon the success which is being had in providing uni-carriers for special cultivation jobs in the districts, State Director Emerson has the following to say:

"Our four uni-carriers are kept busy all of the time. The demand for this machine is greater than we can take care of. It is estimated that approximately 300 cooperators would use these machines where they are available to them. One uni-carrier is assigned in each subdistrict to approximately 75 miles of shelterbelt. In order to meet demands, at least two machines should be available for each subdistrict of this mileage.

"In the Alliance District four uni-carriers are in use constantly; in fact, the demand for these machines is so great that farmers come as far as 20 to 30 miles for the use of them in just cultivating a half of a mile or mile strip. The last time I was in the Alliance District one of these machines was moved eight miles by a cooperator and then brought to town a total of twelve miles, where another farmer came in 20 miles to get it."

TIME TO START CULTIVATION CAMPAIGN IS DURING NEGOTIATION

The Nebraska Unit is much interested in determining the proper job load for cultivation contact men measured in number of miles of shelterbelts which one man can efficiently handle. As the Project is embarked on a new phase of our evolution in requiring (and incidentally getting) nearly 100% farmer cultivation, I believe every State Director has been much concerned in establishing this job load. In Nebraska we set up our organization with the assumption that one man could handle about 75 miles of shelterbelts, which constituted on the average 150 individual owners.

We are now finding that our estimate of the capacities of our better contact men was too low, and also that for the first time our field men are really appreciative of the part the negotiator plays and of requirements for adequate land preparation prior to planting. Because a recent letter from one of our Shelterbelt Assistants, who has charge of our youngest District, expresses conditions so well for a man, District, and area where no precedents or preconceived ideas have been established, I believe other readers of this bulletin will be interested in its contents. Mr. Hougland writes from Pierce as follows:

"I certainly am of the opinion that one contact man can handle 100 miles of shelterbelt plantings in regard to cultivation, as well as some other phases of the work. The ease with which 100 miles can be handled on cultivation depends entirely on ground preparation, which in turn is dependent to a large extent on soil types and the negotiator.

"At the present time our Mr. Evans, of the Plainview subdistrict, has approximately 68 miles of planting to look after. Most of these plantings are situated in fairly heavy soil types which permitted considerably better than average soil preparation. It consumes approximately two weeks' time for Mr. Evans to contact all cooperators in his subdistrict. Of approximately 40 miles of shelterbelts inspected in his territory by myself, I have found only two that required immediate attention. On the other hand, in parts of the Pierce and Norfolk subdistricts, considerable difficulty has been encountered in relation to stands of rye. This again reflects back to preparation, soil types, and the negotiator. However, I am confident that even in the sandier soils an experienced man is able to take care of 100 miles of belts in a satisfactory manner.

"We also know that a contact man takes interest and pride in keeping his area in the best possible condition. We feel confident that these men will make every effort possible during negotiations and planting to have a complete understanding with the cooperator as to the care of his plantation so that it may result in the most good for the cooperator - and incidentally for the Service."

I, for one State Director - and I am sure all District men - would be interested in knowing what other States are discovering along this line.

- John L. Emerson, Nebr.

### "CURLY" LUND LEAVES THE PROJECT

When a man loses his right arm, eye or leg it is a calamity. When the South Dakota Unit loses a man like "Curly" Lund it constitutes a loss that cannot be put into words. If the Project in South Dakota has been successful, and we believe it has even under the most adverse weather conditions, I personally feel that "Curly" Lund has been more responsible for that success than any other man. The plantations sold the work in this State, rather than our preachings and teachings, and "Curly's" District has always been "tops" as far as results in establishing excellent shelterbelts is concerned.

"Curly" started work as Assistant Conservationist with the Soil Conservation Service at Huron, South Dakota on July 1. The change is their gain and our very distinct loss. When I told Ed Casey, owner of the now famous Casey shelterbelt, that "Curly" was leaving us he said, "No, that can't be! I won't stand for it - none of us will stand for it. By gosh, something has got to be done about it. He's got to stay. This community can't get along without him."

I swear by the big horned spoon those were his exact words as nearly as I can remember them. I ask you, can a better tribute be paid to any district officer in any State in our Project?

- A. L. Ford, S.Dak.

### THEY DESERVE A MEDAL!

Among the 100 percent true cooperators here in Pratt County, we find Mr. Chitwood who commonly hauls a team of mules more than eight miles to cultivate his trees. His cultivation equipment is stored at one end of the shelterbelt where it is ever handy and Mr. Chitwood may be found hoeing while his hired man is thoroughly doing the machine cultivation. To load and unload mules twice and move them this far to cultivate shelterbelts on rented property surely indicates that Mr. Chitwood is a tree enthusiast.

In the northern part of the county, we have Mr. Henderson who is an active Township Tree Committeeman. He has extensive land holdings which he is developing with tree protection. Henderson likes to think of his trees as he does insurance - he does not have more than he can properly care for at a time. He realizes that the value and success of his trees depends on the care he is able to give them.

Another good cooperator living farther east in the county is doing his share by serving as a checking point for cultivation equipment which the Forest Service is furnishing for the farmers to use. Mr. Epperson takes care of the equipment and has it returned to his farm in the same manner as though it were his own. He either has the equipment at his farm or is able to tell just where it may be found. He is an enthusiastic 1938 cooperator and will take active part as a Tree Committeeman in his township this coming season.

- C. Lyman Calahan, Kans.

RUSSIAN-OLIVE  
(*Elaeagnus Angustifolia L.*)

(This is the fourth of a series of articles by Mr. Engstrom on the principal tree species used by this Project.)

From a Project-wide viewpoint, the Russian-olive must be regarded as the shrub species that we could least afford to dispense with. In the four northern States it is considered equal to or better than any of the other commonly used shrub species, while in the two southern States it is accorded second or third rating. No other shrub species enjoys a comparable standing throughout the entire zone.

The Russian-olive, in common with several of our other more valuable species, is introduced from Russia or Siberia. It has a wide geographical range in its native habitat, its many varieties extending from the countries bordering the Mediterranean Sea across Southern Siberia to Northern China. The hardiest forms of this tree were brought into this country by the Russian Mennonites, along in the 70's or 80's, the exact date not being available. Since then it has been widely planted, especially throughout the central and northern Great Plains for windbreak and ornamental purposes.

This species is considered as a tall shrub for the purpose of shelterbelt planting. Actually, when widely spaced and growing under favorable conditions and pruned, it will grow into a tree nearly two feet in diameter and 40 to 50 feet in height. However, when not pruned it has a low branching habit of growth, often developing several leaning or irregular stems near the ground, and therefore when planted fairly close together the branches interlace and it grows into a thick hedge capable of turning livestock.

The Russian-olive is quite distinctive in appearance, differing markedly from all our other shelterbelt species. It has soft wooly or velvety silver gray foliage and in late spring bears numerous fragrant yellow blossoms. Its clusters of gray-white mealy berries, which ordinarily are abundant, ripen in early fall and frequently remain on the tree into the winter. These berries are a favorite food of birds and small animals of all kinds, and since the fruit is persistent on the tree the species enjoys high ranking for wildlife purposes.

The adaptability of the Russian-olive to various soil types is one of its outstanding features. It will probably withstand as much alkali as any of our major species. On dry difficult sites it shows up very well, even though its rate of growth may be slow. It should not, however, be planted in locations where it will be subjected to occasional standing water or in poorly drained bottomland sites.

Farmers favor the Russian-olive as a hedge tree since its root system is inclined to be deep rather than spreading, and therefore it does not appreciably impoverish closely adjacent growing crops.

The Russian-olive's wide range in its native habitat in the Old World has resulted in several forms from different parts of its range

being brought into this country. It seems fairly apparent that a variation in hardiness and adaptability to our conditions exists among the different strains, and therefore when selecting seed trees it is well to bear this in mind. The form producing small white seed and having spinescent branchlets bearing comparatively small leaves is considered to be the most desirable for Plains planting.

The Russians have developed a technique of growing the Russian-olive into hedges that take the place of fences for turning livestock. The seedlings are planted a foot apart in the row and are allowed to grow without trimming or pruning of any kind for five years. Growing under this close spacing the tree develops a single trunk which at the age of five years is cut back to the ground. Large numbers of spiny sprouts which make a vigorous growth and form a strong interwoven mass of branches result from this cutting back operation. Because of the thorns livestock will not attempt to force passage through these barriers, and it is even claimed that rabbits cannot penetrate them.

The chief weakness of the Russian-olive under our conditions is its susceptibility to hail injury. The bark on all new growth remains thin and easily penetrable for a number of years, and therefore hail storms, even those of moderate to light intensity, injure the trees more than any of our other species. Ordinarily, however, rapid recovery from hail damage may be expected if other factors remain favorable, since profuse sprouting from the older uninjured portions of the tree immediately takes place. It is, therefore, considered desirable to severely cut back the hail injured trees.

Other than being subject to grasshopper defoliation, the Russian-olive appears to be comparatively immune to insect and disease damage. The species also possesses qualities that render its foliage when green unpalatable to livestock. Usually jack rabbits will pass up Russian-olive for other food, but the cottontail is reported to cause some damage to it.

The Russian-olive is classed as one of the more difficult species to grow in the nursery, wholly because of its hairy or velvety foliage. Rains spatter dirt on the leaves and the pubescence causes the dirt to adhere closely, ultimately smothering the tiny plants unless it is removed by brushing or washing.

Russian-olive's only utility is for fuel, the wood when dried having good heating qualities. In the desert region of the old countries around the oases where it is the only tree species of consequence to be used for fuel, it is pollarded periodically in order to produce a greater volume of wood.

- Harold E. Engstrom, R.O.

#### ENGLISH SCIENTIST STUDIES SHELTERBELTS

T. R. Peace, Forest Pathologist, Imperial Forestry Institute, Oxford, England, visited shelterbelt plantings in the Neligh District on July 2, accompanied by Ernest Wright, Plant Pathologist of Lincoln, Nebraska, and E. G. Champagne of the Neligh Forest Service District.

Plantings made in 1935, 1936, 1937 and 1938 were visited by the group. Mr. Peace was surprised that the trees had made so much growth in such a short time during a period of such unfavorable growing seasons. He was very interested in the Project and stated he believed that tree plantings of the shelterbelt type would be very effective in controlling wind erosion of the soil, giving crops protection from the hot winds, as well as improve the country generally by making it a better place in which to live.

- R. W. Smith, Nebr.

NEW TYPE POISON PEN

It seems evident that there should be some changes made both in the policy and method of poison pen construction. The policy of having the farmer construct the pens has not been successful, and the present type of stationary poison pens is, generally speaking, inadequate and in some cases a menace. It is impossible to cultivate around them. They are hard to service, and many are located in unfavorable places. The farmers, being inexperienced in poison pen construction, are sometimes sketchy in building them.

Attached to this memorandum is a diagram of a poison pen recommended to replace the old type. It is also recommended that the Forest Service build this pen with the farmer furnishing the material.

This new type of movable, reversible poison pen has the following advantages over the old type of stationary poison pen:

1. It can be rolled over upside down, out of the way, to facilitate cultivation.
2. It can be tipped up on its side, thus making it easier and quicker to replace old bait.
3. It can be moved easily to any part of the belt that is bare of snow where the rabbits habitually run, and where snowdrifts will not cover it over.

- Auburn S. Coe, Sr. Biological Aide, N.Dak.

(Editor's Note: PLAINS FORESTER had no facilities for reproducing the diagram, but the following description will give some idea of the structure:

The pen is seven feet square and four feet, eight inches high to the top wire. The four corner posts are five feet, four inches tall and are tied together by diagonal cross braces that are notched into the posts for greater strength. Barbed wire is stretched around the frame at eight-inch intervals, leaving an eight-inch length of post on the top and bottom. Thus, when the pen is rolled over the lowest wire is always eight inches from the ground. With this type of construction considerable strength can be obtained with the use of light material, which makes the pen light and easily handled in shifting from one position to another.)

"WALT" PALMER ASSUMES ADDED RESPONSIBILITY

"Walt" Palmer is married. His bride is a peach. He met her last winter during his detail in Oklahoma. It must have been love at first sight with a whirlwind romance of less than four months, and now they have each other for good. What a story.

I knew that Walt had become interested in Oklahoma. He asked me for five days' annual leave. I asked him where he was going, and he said he wanted to make a flying trip back to Oklahoma "to help his girl's old man put up his wheat." Then he returned and on time, mind you, with the prettiest June bride we have seen in many a year. Walt is "nuts" about her, and so are we all.

The initiation consisted of a midnight parade through the main streets of Mitchell with all the appropriate tin cans, old shoes, and whatnot. I personally could not be at the celebration, so sent my regrets and expressed my disappointment in not being able to be one of the first to kiss the bride, though I promised to take care of this latter delinquency at the first opportunity. I adequately fulfilled the promise (at least I personally thought I did) at high noon on the main street of Lake Andes on June 16. Don't ask me how I remember the date so well - I'll never forget it.

Seriously, Mrs. Palmer is swell.

- A. L. Ford, S.Dak.

WEED 'EM OUT AT THE START

After about three discouraging attempts, a cultivation supervisor recently reported that he just couldn't seem to get any action from a certain cooperator. Being new in the district he was interested in learning what approach to make to get the desired results.

In the discussion which followed, the Shelterbelt Assistant was asked how many times this cooperator had been contacted in connection with land negotiations, land preparation, and furnishing fencing material. In each instance the reply indicated an experience similar to that related by the cultivation supervisor. The cooperator intended to comply with all the features of cooperation eventually but never managed to live up to his promises on schedule. The point to be made here is that a poor cooperator generally makes the fact evident by his response to initial requirements whether it be signing up for the planting, land preparation, or furnishing fencing materials.

Most of the field men are familiar with poor cooperator indicators. Why not be guided by these indexes and eliminate as many of the poor co-operators as possible at the start? It will mean the loss of a few miles of plantings but better to lose them at the start than to abandon them the first season after they have been planted.

- L. S. Matthew, Nebr.

SEED COLLECTION MUST BE PROPERLY TIMED

I suggest that we have a two-day training school in September on seed collection. This training will enable us to lower our seed collection costs and give us better seed to plant in the nurseries.

Seed collecting in the past has sometimes been done in a haphazard manner, in some instances by inexperienced collectors. A short training school this fall before seed collecting begins will help eliminate most of our seed difficulties. Collection of immature seed is a common failing, and the results are indicated by the following germination tests run on several lots of hackberry seed collected at different times:

Lot No. 1. 500 seed from 9-3-37 collection

Seed completing germination	126-----	25%
Seed failing to germinate	374-----	75%

Lot No. 2. 500 seed from 9-18-37 collection

Seed completing germination	183-----	37%
Seed failing to germinate	317-----	63%

Lot No. 3. 500 seed from 10-2-37 collection

Seed completing germination	217-----	43%
Seed failing to germinate	283-----	57%

Lot No. 4. 500 seed from regular November collection

Seed completing germination	410-----	82%
Seed failing to germinate	90-----	18%

Seed collectors should be careful to collect only fully mature seed; this applies to all species and not just to hackberry alone. Hackberry and the other drupe seeded species will stand early collecting better than the winged seed.

The druped seed will ripen somewhat after being collected since they are enclosed with the fleshy part of the fruit, which is taken up by the seed itself, and the seed at the same time is protected from drying out.

The winged seeds if collected too early will dry out and shrivel up. The green ash that was collected too early last fall showed only 13 percent germination; of the ash that was collected later at Woodward, 74 percent germinated.

These germination tests should be proof enough that it is a waste of labor and money to collect immature seed, and everyone doing seed collection work should strive to collect more and better seed at less cost.

- Samuel A. Byars, Okla.

PRIVATE ARBORETUM IN NORTH DAKOTA

Alex Alin, Fullerton, North Dakota, has planted 165 species of trees and shrubs on his home place. The plantings made on his farm are of particular interest to foresters. An hour or two spent in his "forest" is very thought-provoking. Among the many interesting discoveries made there, a few are noted below.

Charles B. Waldron, of the Fargo Agricultural College, furnished Alin with hackberry seed native to the Red River Valley, more than 40 years ago. Persistent efforts to grow this tree have been very unsuccessful, each tree freezing back repeatedly every year. The only hackberry of any size on his place is one grown from northeastern South Dakota seed source. This tree is 40 years old, about 25 feet tall, and about six inches in diameter.

A specimen of *Gymnocladus dioicus* (Kentucky coffee tree) planted by Alin nine or ten years ago is about 12 feet tall but has never frozen back.

A few northern Minnesota Jack Pine (*Pinus banksiana*) are still alive on Alin's place, as a result of mulching with Jack Pine limbs from trees which succumbed to the drouth.

The only Black Hills spruce living on the place are ones continuously cultivated; all others gave up the struggle in the 1934 drouth.

Blue spruce have grown to a height of around 30 feet, but the tough years have accounted for heavy mortality among them. Tops of thrifty trees are dying. However, the blues that are protected are still healthy.

Alin's largest home-grown tree was a 40-year-old cottonwood four feet in diameter, now dead and used as fuel.

One black locust in a protected spot has reached a height of about 28 feet.

Alin can boast of the only log cabin in North Dakota built from ponderosa pine grown from nursery stock; trees planted, crop harvested, and cabin built all by one man. The largest ponderosa pine on the farm is 40 feet tall. Alin says: "They will be 100 feet tall long after I am dead and gone." All of those pines have thrived.

Several specimens of the Ohio Buckeye (*Aesculus glabra*) have been planted there. They have done well except that they have suffered from snow breakage.

Alin has been an influence in his community. As a result of his pioneering most of his neighbors have also planted groves. The soil is on the difficult side - upland, Barnes loam, with very low water table.

- L. A. Williams, N.Dak.

US, TOO?

The number of letters, and the length of the letters, which American business men find it necessary to write amaze the business men of other nationalities. The responsibility for American verbosity, I feel sure, lies with the very efficient American stenographer, and the temptation to garrulousness provided by the skill of her fingers. In some offices it seems that letter writing has become a major undertaking, like writing for publication, and not a means to an end.

It is my candid opinion, after reading these letters for about twenty years, that half the typewriters in America should be scrapped, and half the stenographers married off, and the wheels of business would run just as fast and with a good deal less waste effort. If every business man were compelled to read over, at the beginning of each day, copies of the letters he dictated one year before, he would see for himself that many of them were twice as long as necessary, and that many of them were not necessary at all.

- Carl Crow, in "400 Million Customers"

LET US CONSULT OUR SOOTHSAYER

Things We Would Like to Know:

Why is the survival and growth of Osage orange in plantings made late in the season better than those planted prior to April 1, and why also is the survival of this species so much better on the heavier types of soil than on the lighter sandier soils?

Why do inspectors criticize deep cultivation on 1935 belts? Several well-established 1935 plantings that were deep listed last fall are now showing a massive undergrowth between the rows, the growth coming from the root scars caused by deep cultivation. We thought that this thick, solid planting was just what we wanted.

Why are the grasshoppers attacking our clean cultivated shelter-belts this year? We have told the cooperators that the "hoppers" were not as likely to forage on the trees if they were kept clean but this year where there are weeds in the plantation the grasshoppers are feeding on the weeds and not the trees, whereas on the clean belts they are polishing up everything but the roots. Probably we should have consulted the "hoppers" before contacting the farmers.

Why should we continue to cooperate and invest in plantations where wheat has been planted as a cover crop (contrary to our suggestions) and allowed to mature because "it is likely to make 12 or 15 bushels to the acre"? Will this type of farmer ever be a cooperator?

Why do all the "thornless" honeylocust trees that we have planted in recent years have long, spiny thorns on them?

And why did all of that rain have to come in the middle of planting season? Why couldn't some of it be saved until July and August?

- Ralph V. Johnston, Kans.

### ONE WAY TO GET "COOPERATION"

Amos Unruh, a Mennonite farmer of Kiowa County, whose father migrated from Russia about 40 years ago, recently told me some interesting things about tree planting on farms in the old country.

It seems that years ago in Russia in a certain district the people were required by the Government to plant trees on their land and to cultivate and protect them in much the same manner that our shelterbelts are cared for in this country. Apparently requests of the Government were in reality laws to follow, and at regular intervals Government inspectors called to inspect the trees and report on their progress. (And we thought that our contact men were a new thing!) Cooperation was apparently not always at its best as is shown by this episode.

"One inspector called on a neighboring farmer one day and asked to see his trees. This particular farmer had neglected his trees since the last inspection and his woodlot or tree plantation was hidden by tall weeds. The inspector walked with both hands behind him as he followed the farmer out to where the trees should have been, and as the farmer moved through the field frantically parting the weeds with his hands and peering intently at the ground trying to spot even one small tree, the inspector suddenly withdrew from behind his back a short stout whip and vigorously whacked the farmer across the thin part of his britches as he moved down the field. My father told me afterwards that this farmer's trees were well cared for from that time on and eventually grew into a fine grove."

- Robert Draut, Kans.

### WE HELP TO SWAT THE 'HOPPERS

I have heard many say that when grasshoppers are so thick that if they were all full-grown they would cover the ground three inches deep all over the country, it is useless to try to do anything about them. Not being very good believers in hearsay, the Childress County Agent and I held a confab to determine ways and means--our 'hopper crop being in about the above proportion.

The result of our meeting was an agreement to the effect that if the Forest Service would furnish the WPA labor to mix the ingredients, free poison would be furnished our cooperators for distribution in their shelterbelts. A carload of sodium arsenite poison and ten carloads of bran were ordered at once. The mixing plant was opened on the first day of May with considerable newspaper publicity. For many days business was poor--about 8,000 pounds output being the top for any one day. In the meantime, the 'hoppers continued to grow and flourish unmolested for the most part. The County Judge, the Commissioners Court, the County Agent, the Chamber of Commerce and many business men as well as myself began to wonder what was going to happen not only to our trees but to the crops as well; a general meeting was called for May 30, and the pressure was "turned on" to get the farmers to attend.

Some 400 farmers and stockmen filled all the available seats and overflowed into the aisles and corridors. By this time many of them had

already had their first crop planting destroyed and were about ready to get something done. The seriousness of the situation was stressed to them by both the County Agent and myself. The County Agent quoted the price of thirty cents per hundred pounds, the cheapest price in any of the adjoining counties being then sixty-five cents a hundred, giving the Forest Service full credit for its cooperation in making this possible.

When the meeting adjourned the poison mixing plant became the busiest spot in town. The farmers took out over 30,000 pounds that evening, and the business has steadily grown until it became necessary to double shift the mixers, opening at six in the morning and closing at eight in the evening, the output being as high as 80,000 pounds on several different days. One Saturday, June 18, the millionth pound of poison was delivered from the plant and at this time it is still in operation although the daily run is dropping as the 'hoppers get fewer, and they really are coming under control. While we have had quite a bit of damage to our shelterbelts in some cases, it is not nearly so bad as it could have been.

- Edgar H. Kemp, Tex.

: REGIONAL OFFICE :

The employees of the Regional and Nebraska Offices, through their generous subscriptions to the Salvation Army's 1938 Maintenance Fund Campaign, earned a place on the Silver Star Campaign Honor Roll with a total subscription of \$84.00.

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Mr. Mark Thomas (F.C.) and Miss Grace Williams were married in Lincoln on June 11. If Tommy comes to work some morning with suspicious-looking bumps on his head, we will know that the set of sturdy Fiesta dinnerware with which the Regional Office presented him, has been put to other uses than that intended.

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Miss Ella Mae North of the Oklahoma State Office spent a few days in the Lincoln Office acquainting herself with Regional Office files and other methods of procedure. Miss North was careful not to let slip a single "you-all," but in spite of her caution on this point it wasn't difficult to figure out that she was from "daown Saouth."

- Lucille E. Clark, R.O.

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Much as we disliked to do it, a combination of field trips, \*

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State Directors' conference, leave, and whatnot made it necessary \*

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to combine the June and July numbers of PLAINS FORESTER in this \*

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one issue. We owe - and hereby tender - an apology to those con-

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tributors whose brain-children it was necessary to pass over for \*

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the time being; we hope to be able to officiate at the christen-

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ing of all of them in due time.

- The Editor

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